More Indices Questions

1) Simplify $\left(\dfrac{1}{4}\right)^{-\frac{1}{2}}$

2) Simplify $16^{\frac{3}{2}}$

3) Simplify $\dfrac{x^{\frac{5}{3}} \times x^{-\frac{1}{3}}}{x^{-\frac{2}{3}}}$

4) Simplify $\left(5^{\frac{1}{3}}\right)^{-6}$

5) If $\sqrt{32} = 2^k$, state the value of k

6) If $\sqrt{50} - \sqrt{2} = 2^k$, state the value of k

7) If $9^c \times 3^5 = 3^k$, express k in terms of c

8) If $27^x = 3^{x+5}$ find the value of x